



# ASSISTIVE TECHNOLOGY IN ELEMENTARY MATHEMATICS EDUCATION: TOOLS AND OPPORTUNITIES

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## ABSTRACT

As digital technology peaks up, its effect over children and youth can be easily seen. As we become more reliant in technology, today's children have become avid users as well. Many researchers have different view about technology presence on children lives. As per study, more than 60% of future jobs will be directly or indirectly dependent on the use of digital technology and expertise. With this, it become important to have more studies on assistive technology. This paper focuses on the assistive technology that can be employed in elementary classrooms so our children get acquaintance with technology and tools in classroom to enhance learning. further, this paper will also take a look upon opportunities that will be made available with the assistive tools involved.

**KEYWORDS:** Assistive Technology, Collaborative Learning, Group Learning, Classroom Technology (Sum Dog, Haiku Deck And Popplet)

## INTRODUCTION:

Engaging students in classroom is a challenge. Today the attention span of kids have decreased. Assistive Technology can help teachers and managers to tackle situations upto few extent. Several tools and computer assisted technology and software have been introduced to make learning easy and interesting. Subjects like mathematics are high risk subjects where children find less interest and hence, assistive technology can be helpful.

Assistive technology Assistive technology is a set of devices used to help people who have disabilities. Many assistive devices are built using artificial intelligence (AI) technologies, including real-time speech-to-text transcription and visual recognition tools.

The objective of the present paper is to study the assistive technology that can be employed in mathematics classroom at elementary level.

### Assistive technology devices:

**Eye Gaze Trackers** Eye gaze tracking helps people with physical impairments move a mouse on a computer screen

**Hearing Devices** can be employed for children with hearing problems.

**Speech Generating Devices** several technology and electronic devices have come into existence.

### Computer Access Aids:

Head sticks, light pointers, modified or alternate keyboards, switches activated by pressure, sound or voice, touch screens, special software, voice to text software that enable persons with disabilities to use a computer. This category includes speech recognition software.

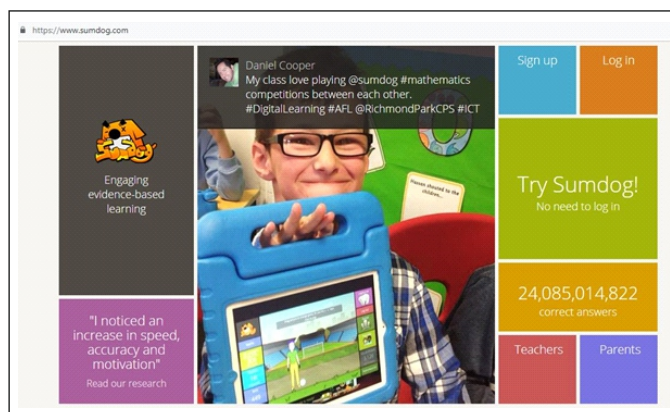
### Assistive technologies that can be employed in classroom:

#### 1. Sum Dogs:

Sum dog is an engaging app for making learning of mathematics fun. It can act as assistive technology as it provides wonderful opportunity of teaching kids with animated cartoon and making maths fun.

As it does no require any voice modulation understanding..students with hearing impairment can easily operate it and can work on mathematics assignment easily.

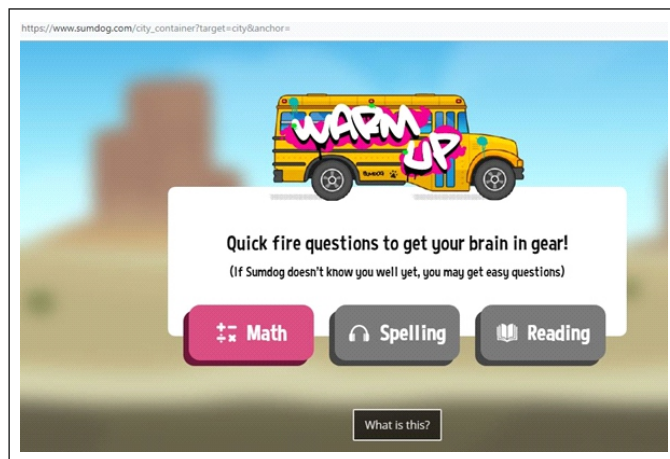
Images below expresses the screen format which is user friendly for students with assistive need.



### Mathematics:

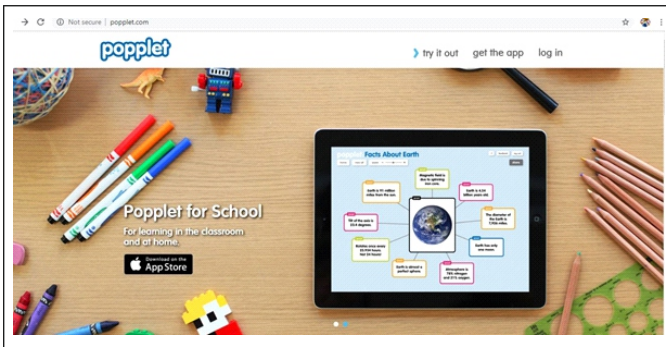
Language and grammer can be well taken care with sum dog.

#### 2. Haiku Deck:



#### 3. Popplet:

popplet is a tool for web and smart phones to capture ideas of individual and give a shape to ideas. In the classroom and at home, students use Popplet for learning. Used as a mind-map, Popplet helps students think and learn visually. Students can capture facts, thoughts, and images and learn to create relationships between them.



**AGAIN IT CAN BE USED IN A CLASSROOM BY STUDENTS WHO NEED TECHNOLOGY TOOLS TO EXPRESS THEIR IDEAS.**

#### **CONCLUSION:**

With the advancement of technology, rapid demand for incorporation of tools and opportunities has grown. Assistive Technology has given path for making learning of students with assistive needs. Collaborative learning can be a new for teaching kids how to learn and work in a group. Classrooms tools such as sum dog and popplet can work as wonders.

Assistive technology provides various opportunities and teachers have their special role to play.

Technology can never replace teachers though it can give revolutionary tools for making learning easier.

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